

## WEST Search History

DATE: Monday, August 30, 2004

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	<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=AND</i>		
<input type="checkbox"/>	L1	landegren.in.	62
<input type="checkbox"/>	L2	L1 and kit.clm.	8
<input type="checkbox"/>	L3	kit.clm. same three.clm.	804
<input type="checkbox"/>	L4	L3 same oligo\$.clm.	55
<input type="checkbox"/>	L5	L4 and (antibod\$ or protein or polypeptide or peptide or poly-peptide or antigen).clm.	11

END OF SEARCH HISTORY



## aptamer

<molecular biology> A double stranded DNA or single stranded RNA molecule that bind to specific molecular targets, such as a protein or metabolite.

(13 Oct 1997)

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**Previous:** [aprosody](#), [aprosopia](#), [a-protein](#), [aprotic](#), [aprotinin](#), [APS](#), [apsidal](#), [apsis](#), [apt](#)

**Next:** [aptera](#), [apteral](#), [apteran](#), [apteria](#), [apterous](#), [apteryges](#), [apteryx](#)

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L2: Entry 3 of 8

File: USPT

May 6, 2003

US-PAT-NO: 6558928

DOCUMENT-IDENTIFIER: US 6558928 B1

TITLE: Rolling circle replication of padlock probes

DATE-ISSUED: May 6, 2003

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
<u>Landegren; Ulf</u>	Uppsala		S-751 23	SE

US-CL-CURRENT: 435/91.1; 435/7.1, 435/91.2, 536/24.3

## CLAIMS:

What is claimed is:

1. A method comprising: i) providing a padlock probe for the target sequence, ii) forming a hybrid of the padlock probe with the target nucleic acid, and circularizing the padlock probe, iii) cutting the target nucleic acid at or near the target sequence, this step iii) being performed before, during or after step ii), and iv) effecting rolling circle replication of the padlock probe.
2. The method of claim 1, wherein step iii) is performed by subjecting the hybrid to restriction thereby cutting the target nucleic acid at or near the target sequence but without cutting the circularised padlock probe.
3. The method of claim 1, wherein in step iii) the target nucleic acid is cut within the target sequence to provide a primer by means of which rolling circle replication of the padlock probe is effected in step iv).
4. The method of claim 1, wherein the target nucleic acid is cut downstream of the target sequence following which any non-basepaired nucleotides are removed by a 3'-exonuclease.
5. The method of claim 4, wherein Phi29 is used as a polymnerase enzyme having also 3'-exonuclease activity.
6. The method of claim 3, wherein in step iii) restriction is effected by means means of a type IIS enzyme.
7. The method claim 1, wherein the target nucleic acid is circular.
8. An oligonucleotide suitable for use as a padlock probe for a target nucleic acid sequence, which oligonucleotide has 5'-end and 3'-end sequences complementary to the target sequence; a first site for recognition by a type

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## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
<u>Landegren; Ulf</u>	Uppsala		S-751 23	SE

APPL-NO: 09/ 647036 [\[PALM\]](#)

DATE FILED: March 16, 2001

## FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
EP	98302278	March 25, 1998

## PCT-DATA:

APPL-NO	DATE-FILED	PUB-NO	PUB-DATE	371-DATE	102 (E) -DATE
PCT/EP99/02111	March 25, 1999	WO99/49079	Sep 30, 1999		

INT-CL: [07] [C12](#) [P](#) [19/34](#), [C07](#) [H](#) [21/04](#)

US-CL-ISSUED: 435/91.1; 435/91.2, 435/7.1, 536/24.3

US-CL-CURRENT: [435/91.1](#); [435/7.1](#), [435/91.2](#), [536/24.3](#)

FIELD-OF-SEARCH: 435/6, 435/7.1, 435/91.1, 435/91.2, 435/810, 536/24.3

PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

[Search Selected](#) [Search ALL](#) [Clear](#)

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/> <a href="#">5854033</a>	December 1998	Lizardi	435/91.2

## FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
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97/19193

May 1997

WO

## OTHER PUBLICATIONS

Baner et al., Nucleic Acids Res. 26(22), 5073-5078 (Nov. 15, 1998).

ART-UNIT: 1656

PRIMARY-EXAMINER: Horlick; Kenneth R.

ATTY-AGENT-FIRM: Volpe and Koenig, P.C.

## ABSTRACT:

Rolling circle replication of a padlock primer is inhibited when it is hybridized to a target nucleic acid that is long or circular. The invention provides methods of addressing this problem including cutting the target nucleic acid near or preferably at the site which hybridizes with the padlock probe, whereby a 3'-end of the cut target nucleic acid acts as a primer for rolling circle replication of the padlock probe. Also included is a method of assaying for a polypeptidic target by the use of two affinity probes each carrying an oligonucleotide tag and of a padlock probe for rolling circle replication in association with the two affinity probes

20 Claims, 14 Drawing figures

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L2: Entry 2 of 8

File: PGPB

May 30, 2002

PGPUB-DOCUMENT-NUMBER: 20020064779

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020064779 A1

TITLE: Methods and kits for proximity probing

PUBLICATION-DATE: May 30, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
<u>Landegren, Ulf</u>	Uppsala		SE	
Fredriksson, Simon	Uppsala		SE	

APPL-NO: 09/ 785657 [PALM]

DATE FILED: February 20, 2001

## RELATED-US-APPL-DATA:

Application is a non-provisional-of-provisional application 60/183371, filed February 18, 2000,

INT-CL: [07] C12 Q 1/68, C12 Q 1/70, G01 N 33/53

US-CL-PUBLISHED: 435/6; 435/5, 435/7.1

US-CL-CURRENT: 435/6; 435/5, 435/7.1

REPRESENTATIVE-FIGURES: NONE

## ABSTRACT:

The present invention relates to sensitive, rapid and convenient assays for detection and/or quantification of one or several analyte(s) in solution using so called proximity probes. The proximity probes comprise a binding moiety and a nucleic acid. The nucleic acid from one proximity probe is only capable of interaction with the nucleic acid from the other proximity probe when these are in close proximity, i.e. have bound to the analytes for which they are specific. The present invention relates to methods and kits for proximity probing and are performed in solution without the need of a solid phase.

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